



DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

[Docket No. FWS–R8–ES–2012–0041]

[4500030113]

Endangered and Threatened Wildlife and Plants; 90-Day Finding on Petitions to List the Two Spring Mountains Dark Blue Butterflies and Morand’s Checkerspot Butterfly as Endangered or Threatened

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Notice of petition finding and initiation of status review.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), announce a 90-day finding on petitions to list the Spring Mountains dark blue butterflies (*Euphilotes ancilla purpura* and *Euphilotes ancilla cryptica*) and Morand’s checkerspot butterfly (*Euphydryas anicia morandi*) as endangered or threatened under the Endangered Species Act of 1973, as amended (Act), and to designate critical habitat. Based on our review, we

find that the petition requesting listing of the Morand's checkerspot butterfly does not present substantial information indicating that listing that species may be warranted. In addition, based on our review, we find that the petition requesting listing of the two Spring Mountains dark blue butterflies presents substantial scientific or commercial information indicating that listing these species may be warranted. Therefore, with the publication of this notice, we will initiate status reviews of the two Spring Mountains dark blue butterflies to determine whether listing is warranted. To ensure that these status reviews are comprehensive, we are requesting scientific and commercial data and other information regarding these two subspecies. Based on these status reviews, we will issue a 12-month finding on the petition, which will address whether the petitioned action is warranted, as provided in section 4(b)(3)(B) of the Act.

DATES: To allow us adequate time to conduct this review, we request that we receive information on or before [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]. The deadline for submitting an electronic comment using the Federal eRulemaking Portal (see **ADDRESSES** section, below) is 11:59 p.m. Eastern Time on this date. After [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER], you must submit information directly to the Division of Policy and Directives Management (see **ADDRESSES** section below). Please note that we might not be able to address or incorporate information that we receive after the above requested date.

ADDRESSES: You may submit information by one of the following methods:

(1) *Electronically*: Go to the Federal eRulemaking Portal:

<http://www.regulations.gov>. In the search box, enter FWS–R8–ES–2012–0041, which is the docket number for this action. You may submit a comment by clicking on “Send a Comment or Submission.” If your submission will fit in the provided comment box, please use this feature of <http://www.regulations.gov>, as it is most compatible with our information collection procedures. If you attach your submission as a separate document, our preferred file format is Microsoft Word. If you attach multiple documents (such as form letters), our preferred format is a spreadsheet in Microsoft Excel.

(2) *By hard copy*: Submit by U.S. mail or hand-delivery to: Public Comments Processing, Attn: FWS–R8–ES–2012–0041; Division of Policy and Directives Management; U.S. Fish and Wildlife Service; 4401 N. Fairfax Drive, MS 2042–PDM; Arlington, VA 22203.

We will post all information we receive on <http://www.regulations.gov>. This generally means that we will post any personal information you provide us (see the **Request for Information** section below for more details).

FOR FURTHER INFORMATION CONTACT: Edward D. Koch, Field Supervisor, U.S. Fish and Wildlife Service, Nevada Fish and Wildlife Office, 1340 Financial Blvd., Suite 234, Reno, Nevada 89502, by telephone 775–861–6300 or by facsimile 775–861–6301. Persons who use a telecommunications device for the deaf (TDD) may call the Federal Information Relay Service (FIRS) at 800–877–8339.

This finding is available on the Internet at <http://www.regulations.gov> at Docket Number FWS–R8–ES–2012–0041. Supporting documentation we used in preparing this finding is available for public inspection, by appointment, during normal business hours at the, Nevada Fish and Wildlife Office (see above for address)].

SUPPLEMENTARY INFORMATION:

Request for Information

When we make a finding that a petition presents substantial information indicating that listing a species may be warranted, we are required to promptly initiate review of the status of the species (status review). For the status review to be complete and based on the best available scientific and commercial information, we request information on the two Spring Mountains dark blue butterflies from governmental agencies, Native American tribes, the scientific community, industry, and any other interested parties. We seek information on:

- (1) The species' biology, range, and population trends, including:
 - (a) Habitat requirements for feeding, breeding, and sheltering;
 - (b) Genetics and taxonomy;
 - (c) Historical and current range including distribution patterns;
 - (d) Historical and current population levels, and current and projected trends; and

(e) Past and ongoing conservation measures for the species, its habitat, or both.

(2) The factors that are the basis for making a listing determination for a species under section 4(a) of the Act (16 U.S.C. 1531 *et seq.*), which are:

(a) The present or threatened destruction, modification, or curtailment of its habitat or range;

(b) Overutilization for commercial, recreational, scientific, or educational purposes;

(c) Disease or predation;

(d) The inadequacy of existing regulatory mechanisms; or

(e) Other natural or manmade factors affecting its continued existence.

If, after the status review, we determine that listing either or both of the two Spring Mountains dark blue butterflies is warranted, we will propose critical habitat (see definition in section 3(5)(A) of the Act) under section 4 of the Act, to the maximum extent prudent and determinable at the time we propose to list the species. Therefore, we also request data and information on:

(1) What may constitute “physical or biological features essential to the conservation of the species,” within the geographical range currently occupied by the species;

(2) Where these features are currently found;

(3) Whether any of these features may require special management considerations or protection;

(4) Specific areas outside the geographical area occupied by the species that are “essential for the conservation of the species”; and

(5) What, if any, critical habitat you think we should propose for designation if the species is proposed for listing, and why such habitat meets the requirements of section 4 of the Act.

Please include sufficient information with your submission (such as scientific journal articles or other publications) to allow us to verify any scientific or commercial information you include.

Submissions merely stating support for or opposition to the action under consideration without providing supporting information, although noted, will not be considered in making a determination. Section 4(b)(1)(A) of the Act directs that determinations as to whether any species is an endangered or threatened species must be made “solely on the basis of the best scientific and commercial data available.”

You may submit your information concerning this status review by one of the methods listed in the **ADDRESSES** section. If you submit information via <http://www.regulations.gov>, your entire submission—including any personal identifying information—will be posted on the website. If your submission is made via a hardcopy that includes personal identifying information, you may request at the top of your document that we withhold this personal identifying information from public review. However, we cannot guarantee that we will be able to do so. We will post all hardcopy

submissions on <http://www.regulations.gov>.

Information and supporting documentation that we received and used in preparing this finding is available for you to review at <http://www.regulations.gov>, or by appointment, during normal business hours, at the U.S. Fish and Wildlife Service, Nevada Fish and Wildlife Office (see **FOR FURTHER INFORMATION CONTACT**).

Background

Section 4(b)(3)(A) of the Act requires that we make a finding on whether a petition to list, delist, or reclassify a species presents substantial scientific or commercial information indicating that the petitioned action may be warranted. We are to base this finding on information provided in the petition, supporting information submitted with the petition, and information otherwise available in our files. To the maximum extent practicable, we are to make this finding within 90 days of our receipt of the petition and publish our notice of the finding promptly in the **Federal Register**.

Our standard for substantial scientific or commercial information within the Code of Federal Regulations (CFR) with regard to a 90-day petition finding is “that amount of information that would lead a reasonable person to believe that the measure proposed in the petition may be warranted” (50 CFR 424.14(b)). If we find that substantial scientific or commercial information was presented, we are required to promptly initiate a species status review, which we subsequently summarize in our 12-month finding.

Petition History

Two Spring Mountains Dark Blue Butterflies Petition

On October 6, 2011, we received a petition dated September 30, 2011, from Wild Earth Guardians, requesting that the two Spring Mountains dark blue butterflies (*Euphilotes ancilla purpura* and *Euphilotes ancilla cryptica*) be listed as endangered or threatened, and that critical habitat be designated under the Act. The petition clearly identified itself as such and included the requisite identification information for the petitioner, required at 50 CFR 424.14(a). In a December 20, 2011, letter to the petitioner, we responded that we reviewed the information presented in the petition and determined that issuing an emergency regulation temporarily listing the species under section 4(b)(7) of the Act was not warranted. We also stated that we are currently required to complete a significant number of listing and critical habitat actions by the end of Fiscal Year 2016 pursuant to court orders, judicially approved settlement agreements, and other statutory deadlines, and that we might conduct a review of the petition prior to that time should budget and workload permit. This finding addresses the petition.

Morand's Checkerspot Butterfly Petition

On November 1, 2011, we received a petition dated October 28, 2011, from Bruce M. Boyd, requesting that Morand's checkerspot butterfly (*Euphydryas anicia morandi*)

be listed as endangered or threatened. The petition clearly identified itself as such and included the requisite identification information for the petitioner, required at 50 CFR 424.14(a). In a November 16, 2011, letter to the petitioner, we responded that we reviewed the information presented in the petition and determined that issuing an emergency regulation temporarily listing the species under section 4(b)(7) of the Act was not warranted. We also stated that we are currently required to complete a significant number of listing and critical habitat actions in Fiscal Year 2016 pursuant to court orders, judicially approved settlement agreements, and other statutory deadlines, and that we would conduct a review of the petition once we secured funds for this action. This finding addresses the petition.

Previous Federal Action(s)

Two Spring Mountains Dark Blue Butterflies Petition

On November 21, 1991 (56 FR 58804), we added *Euphilotes enoptes* ssp. (dark blue butterfly) to our list of candidate species as a Category 2 candidate species.

Euphilotes enoptes ssp. is currently recognized as *E. ancilla*. A Category 2 candidate species was a species for which we had information indicating that a proposal to list it as threatened or endangered under the Act may be appropriate, but for which additional information on biological vulnerability and threat was needed to support the preparation of a proposed rule. *Euphilotes enoptes* ssp. (dark blue butterfly) (= *E. ancilla* ssp.) was again included in our Category 2 candidate list on November 15, 1994 (59 FR 58982).

In the February 28, 1996, Candidate Notice of Review (CNOR) (61 FR 7595), we adopted a single category of candidate species defined as follows: “Those species for which the Service has on file sufficient information on biological vulnerability and threat(s) to support issuance of a proposed rule to list but issuance of the proposed rule is precluded.” In previous CNORs, species meeting this definition were known as Category 1 candidates for listing. Thus, the Service no longer considered Category 2 species as candidates, including *Euphilotes enoptes* ssp. (dark blue butterfly) (= *E. ancilla* ssp.), and did not include it in the 1996 list or any subsequent CNORs. The decision to stop considering Category 2 species as candidates was designed to reduce confusion about the status of these species and to clarify that we no longer regarded these species as candidates for listing.

Morand’s Checkerspot Butterfly Petition

On January 6, 1989, we added Morand’s checkerspot butterfly (*Euphydryas anicia morandi*) to our list of candidate species as a Category 2 candidate species (54 FR 554–579). Morand’s checkerspot butterfly was again included in our Category 2 candidate list on November 21, 1991 (56 FR 58804), and in our Category 2 candidate list on November 15, 1994 (59 FR 58982). Morand’s checkerspot butterfly was not included in the 1996 list or any subsequent CNORs.

Species Information

The three butterfly subspecies included in the two petitions and evaluated in this finding are invertebrates endemic to the Spring Mountains in Nevada. All three of the petitioned butterflies are from the phylum Arthropoda, class Insecta, order Lepidoptera. The two dark blue butterflies are members of the family Lycaenidae. The Morand's checkerspot butterfly is a member of the family Nymphalidae. In specific sections below, we have included a short summary of available population and life-history information for each subspecies, as provided in the petitions, their references, and our files.

The two Spring Mountains dark blue butterflies petition provides information regarding the subspecies ranking for *Euphilotes ancilla purpura* according to NatureServe (WildEarth Guardians 2011, p. 4). *Euphilotes ancilla purpura* is considered at the subspecies taxonomic level and is ranked imperiled at the subspecies and national levels, and imperiled/critically imperiled at the State level, whereas *E. a. cryptica* is not ranked by NatureServe (NatureServe, 2012). In addition, NatureServe considers Morand's checkerspot butterfly at the subspecies taxonomic level and ranks it as imperiled at the subspecies, national, and State levels (NatureServe, 2012). According to the NatureServe website, assessment of any species "does not constitute a recommendation by NatureServe for listing [that species]" under the Act (NatureServe 2012). In addition, NatureServe's assessment procedures include "different criteria, evidence requirements, purposes and taxonomic coverage [from those of] government lists of endangered and threatened species, and therefore these two types of lists should not be expected to

coincide” (NatureServe 2012).

Two Spring Mountains Dark Blue Butterflies

The taxonomy of the two Spring Mountains dark blue butterflies was recently changed, and this change has been accepted by local experts. Prior to 2008, both subspecies were grouped together as *Euphilotes ancilla purpura*, whereas after 2008, *E. a. purpura* was split into *E. a. purpura* and *E. a. cryptica*. Austin *et al.* (2008) notes the differences in phenology and host plants between the two Spring Mountains dark blue butterflies (*E. a. purpura* and *E. a. cryptica*) and describes them as two subspecies centered around these biological differences. Based upon the information in the petition and in our files discussed above, we accept the characterization of the two Spring Mountains dark blue butterflies as subspecies.

The two Spring Mountains dark blue butterflies (*Euphilotes ancilla purpura* and *E. a. cryptica*) are endemic to the Spring Mountains in southern Nevada; *E. a. purpura* only occurs in Clark County, whereas *E. a. cryptica* occurs in both Clark and Nye Counties (Austin *et al.* 2008, p. 151). Austin *et al.* (2008) describe the two dark blue butterflies as separate subspecies based on differences in phenology and host plants. For example, *E. a. purpura* uses *Eriogonum umbellatum* var. *juniporinum* (juniper buckwheat) as its larval host plant and has a flight season from early May to early July (Austin *et al.* 2008, p. 156). On the other hand, *E. a. cryptica* uses *Eriogonum umbellatum* var. *subaridum* (sulphur-flower buckwheat) as its larval host plant and has a

flight season from mid-July to mid-August (Austin *et al.* 2008, p. 156). The two subspecies also differ in the length of their flight seasons, their frequencies of visitations to mud, and the length of different life stages (pupation, diapause, and emergence); however they look identical (Austin *et al.* 2008, p. 156). *Euphilotes ancilla purpura* is known only from the east slope of the Spring Mountains between Willow Creek and West Mud Spring and lower Macks Canyon near the northern end of the Spring Mountains in Clark County at an elevation range of 1,775–1,950 meters (m) (2,543–6,398 feet (ft)) (Austin *et al.* 2008, p. 158). *Euphilotes ancilla cryptica* is known from several sites on both slopes of the Spring Mountains in Nye and Clark Counties, Nevada, from Big Timber Spring to Potosi Mountain at an elevation range of 1,800–3,000 m (5,906–9,843 ft) (Austin *et al.* 2008, p. 158). The distributions of *E. a. purpura* and *E. a. cryptica* overlap in Clark County (Austin *et al.* 2008, p. 151).

Morand's Checkerspot Butterfly

Gunder (1928) first described Morand's checkerspot butterfly as a subspecies. Based upon the information in the petition and in our files discussed above, we accept the characterization of Morand's checkerspot butterfly as a subspecies.

Morand's checkerspot butterfly is endemic to the Spring Mountains in southern Nevada and occurs in Clark County. It is locally common in the meadows on the ridge to Mt. Charleston and above the ski area in Lee Canyon, and it generally occurs above 2,012 m (6,601 ft) in elevation (Austin and Austin 1980, p. 44). The flight period for Morand's

checkerspot butterfly is from late June to July (Austin and Austin 1980, p. 44). The larval host plants for Morand's checkerspot butterfly are *Castilleja linariifolia* (narrow leaved paint brush), *Castilleja applegatei* ssp. *martini* (= *C. martinii* var. *clokeyi*, wavy leaved paint brush), *Penstemon eatonii* (scarlet bugler, firecracker penstemon), *P. leiophyllus* var. *keckii* (Charleston beardtongue), and *P. rostriflorus* (scarlet penstemon, beaked beard-tongue) (Weiss *et al.* 1995, p. 4; Niles and Leary 2007, p. 55–56; Austin and Leary 2008, p. 106–107). Morand's checkerspot butterfly appears in three distinct phenotypes (the observable properties of an organism) on the Spring Mountains (Weiss *et al.* 1995, p. 4).

Evaluation of Information for this Finding

Section 4 of the Act (16 U.S.C. 1533) and its implementing regulations at 50 CFR 424 set forth the procedures for adding a species to, or removing a species from, the Federal Lists of Endangered and Threatened Wildlife and Plants. A species may be determined to be an endangered or threatened species due to one or more of the five factors described in section 4(a)(1) of the Act:

- (A) The present or threatened destruction, modification, or curtailment of its habitat or range;
- (B) Overutilization for commercial, recreational, scientific, or educational purposes;
- (C) Disease or predation;

- (D) The inadequacy of existing regulatory mechanisms; or
- (E) Other natural or manmade factors affecting its continued existence.

In considering what factors might constitute threats, we must look beyond the mere exposure of the species to the factor to determine whether the species responds to the factor in a way that causes actual impacts to the species. If there is exposure to a factor, but no response, or only a positive response, that factor is not a threat. If there is exposure and the species responds negatively, the factor may be a threat and we then attempt to determine how significant a threat it is. If the threat is significant, it may drive or contribute to the risk of extinction of the species such that the species may warrant listing as threatened or endangered as those terms are defined by the Act. This does not necessarily require empirical proof of a threat. The combination of exposure and some corroborating evidence of how the species is likely impacted could suffice. The mere identification of factors that could impact a species negatively may not be sufficient to compel a finding that listing may be warranted. The information shall contain evidence sufficient to suggest that these factors may be operative threats that act on the species to the point that the species may meet the definition of threatened or endangered under the Act.

In making this 90-day finding, we evaluated whether information regarding threats to the two Spring Mountains dark blue butterflies and the Morand's checkerspot butterfly, as presented in the petition and other information available in our files, is substantial, thereby indicating that the petitioned actions may be warranted. Our

evaluation of this information is presented below.

Two Spring Mountains Dark Blue Butterflies Petition

A. The Present or Threatened Destruction, Modification, or Curtailment of Its Habitat or Range.

Information Provided in the Petition

The petition states that both subspecies of dark blue butterfly are at risk from wildfire exacerbated by invasive weeds, habitat degradation from recreation, off-road vehicle use, and equestrian use (WildEarth Guardians 2011, p. 10; Austin *et al.* 2008, p. 158). Specifically, cheatgrass (*Bromus tectorum*) and red brome (*B. rubens*) are described as being present in the Spring Mountains National Recreation Area (SMNRA) and are known to alter natural fire regimes and convert landscapes to annual grasslands (WildEarth Guardians 2011, p. 10). In addition, the petition states that a fire fuels reduction project was approved by the Humboldt-Toiyabe National Forest in 2007 with targeted sites in *Euphilotes ancilla purpura* and *E. a. cryptica* locations (WildEarth Guardians 2011, p. 10). The fuels reduction project plan analyzed the potential impacts to *E. a. purpura*, concluding that it may impact *E. a. purpura*, but impacts to *E. a. cryptica* were not separately analyzed (WildEarth Guardians 2011, p. 10).

The petition also notes that ungulates may affect the two Spring Mountains dark

blue butterflies (WildEarth Guardians 2011, p. 17). Specifically, the petition states that *Eriogonum* spp. are palatable to native ungulates and domestic livestock, and Austin *et al.* (2008, p. 153) found that ungulates heavily grazed *Eriogonum umbellatum subaridum* and severely reduced the number of flowers available to *Euphilotes* (WildEarth Guardians 2011, p. 17).

Evaluation of Information Provided in the Petition and Available in Service Files

The petition does not present any specific supporting information that wildfire exacerbated by invasive weeds may be impacting the two Spring Mountains dark blue butterflies or is likely to in the future. The petition does not present specific information concerning past, present, or projected intensity of wildfire in or near areas occupied by the two Spring Mountains dark blue butterflies. The petition does not present specific information as to whether this potential threat has affected, is affecting, or is likely to affect the subspecies, their host plants, or nectar sources. The petition also does not report loss of populations or reductions in numbers of either of the subspecies as a result of wildfire exacerbated by invasive weeds. We have information in our files related to vegetation and fire history in the Spring Mountains (Hall 2006; Craig 2010); however, we have no information in our files about the impacts of wildfire upon either of the two Spring Mountains dark blue butterflies or their habitats.

The petition states that ungulates may affect the two Spring Mountains dark blue butterflies, and the petition cites Austin *et al.* (2008, p. 153) regarding ungulate grazing

and its effect on *Eriogonum umbellatum subaridum* and *Euphilotes* (WildEarth Guardians 2011, p. 17). Austin *et al.* (2008, p. 153) states that ungulate grazing was heavy in 2002, “severely reducing the number of flowers available to any *Euphilotes* present.” However, the information in the petition and in our files does not provide specific supporting information that ungulate grazing may be affecting the two Spring Mountains dark blue butterflies now or in the future. The petition does not present specific information concerning past, present, or projected intensity of ungulate grazing in or near occupied or suitable locations. The petition does not present specific information as to whether this potential threat has affected, is affecting, or is likely to affect either of the two subspecies, their host plants, or their nectar sources, other than saying that ungulate grazing did occur in 2002 at one site. We have no information in our files related to ungulate grazing and its impacts to either of the two Spring Mountains dark blue butterflies or their habitats.

Information in our files confirms that the 2007 Spring Mountains Hazardous Fuels Reduction Project analyzed the potential impacts to *Euphilotes ancilla purpura*, concluding that the project “may impact individuals, but is not likely to cause a trend to Federal listing or loss of viability of the subspecies” (USDA 2007, p. 18). In addition, the project states that “long-term benefits to larval host and nectaring plant populations may occur” (USDA 2007, p. 18). These projects have been implemented, but no post-implementation assessment of impacts to these butterfly species has occurred.

Information in our files references a 2010 Blue Tree Trails Project to be conducted in Lee Canyon with the goal of “diversifying the trail experience on the National Recreation Area by designating additional multiple-use trails to meet visitor needs for trails

outside of Wilderness, at lower elevations for a year-round experience that are easier to navigate, and located to avoid adverse impacts to natural resources” (USDA 2010, p. 1). The trails system is intended for nonmotorized recreation opportunities for equestrians, mountain bike users, and hikers, and includes improving 45 miles (mi) (72 kilometers (km)), rerouting 17 mi (27 km), and closing 8.5 mi (14 km) of trails, resulting in a trail system of approximately 53.5 mi (86 km) in length, constructed to meet United States Forest Service pack and saddle trail standards (USDA 2010, p. 1). The Blue Tree Trails Project aimed to minimize the loss of individual sensitive plants and covered butterfly host plants, and minimize the loss of habitat (USDA 2010, Appendix C). The Blue Tree Trails Project analyzed the potential impacts to the species covered in the Spring Mountains Conservation Agreement and Clark County Multiple Species Habitat Conservation Plan; *Euphilotes enoptes* ssp. (Spring Mountains dark blue butterfly) was listed as a covered species in the 1998 Conservation Agreement. The Blue Tree Trails Project analysis determined that the project “may impact individuals, but is not likely to cause a trend to federal listing or loss of viability” (USDA 2010, p. 4).

Information in our files describes a 2011 Archery Range Restoration Project that is designed to “correct and prevent soil compaction and erosion problems, restore and protect natural resource habitat, and eliminate unauthorized use of NFS lands” (USDA 2011, p. 5). This project analyzed the impacts to the Spring Mountains dark blue butterfly (*Euphilotes ancilla purpura* and *E. a. cryptica*), and the analysis showed that the project may impact individuals, but is not likely to cause a trend to Federal listing or loss of viability of the two subspecies (USDA 2011, p. 3).

Information in our files reveals that three projects have taken place in areas that have the potential to impact the two Spring Mountains dark blue butterflies, however, there is no information in the petition or in our files regarding post-project conditions to indicate that any of these projects may have negatively impacted habitat for either of the two Spring Mountains dark blue butterflies such that the petitioned action may be warranted.

In summary, we find that the information provided in the petition, as well as other information in our files, does not present substantial scientific or commercial information indicating that the petitioned action may be warranted due to a fuels reduction project, wildfire exacerbated by invasive weeds or ungulate grazing, or recreational activities. However, we will further evaluate all factors, including the present or threatened destruction, modification, or curtailment of their habitat or ranges, in our 12-month status review and finding for these subspecies.

B. Overutilization for Commercial, Recreational, Scientific, or Educational Purposes.

Information Provided in the Petition

The petition states that collection of the two Spring Mountains dark blue butterflies has taken place by scientists and amateur collectors for many years (WildEarth Guardians 2011, p. 16). In addition, the petitioner claims to have encountered an individual who illegally captured a protected butterfly species in the Spring Mountains

range (WildEarth Guardians 2011, p. 16).

Evaluation of Information Provided in the Petition and Available in Service Files

The petition states that collection of butterflies in the Spring Mountains has taken place for a long time and that illegal capture of Spring Mountains butterflies has occurred. However, the petition does not provide information that overutilization for commercial, recreational, scientific, or educational purposes has negatively impacted either of the two Spring Mountains dark blue butterflies. In addition, we have no information in our files related to overutilization for these two subspecies. In summary, we find that the information provided in the petition, as well as other information in our files, does not present substantial scientific or commercial information indicating that the petitioned action may be warranted due to overutilization for commercial, recreational, scientific, or educational purposes. However, we will further evaluate all factors, including overutilization for commercial, recreational, scientific, or educational purposes, in our 12-month status review and finding for these subspecies.

C. Disease or Predation.

Information Provided in the Petition

The petition notes that parasitism of *Euphilotes* larvae is expected, although there has been no evidence of parasitism of larvae in samples collected from the Spring

Mountains (WildEarth Guardians 2011, p. 16). The petition states that parasitism of butterfly larvae by tachnid flies (Diptera) and braconid wasps (Hymenoptera) has been recorded at rates of 60 percent in California and Washington (WildEarth Guardians 2011, p. 16). The petition also notes that, generally, larvae and adult butterflies are preyed upon by many vertebrate and invertebrate wildlife (for example, birds, herptofauna, and other insects), but it is not known whether predation is a threat to the two Spring Mountains dark blue butterflies (WildEarth Guardians 2011, p. 16). The petition states that disease is not known to be a threat to the two Spring Mountains dark blue butterflies (WildEarth Guardians 2011, p. 16).

Evaluation of Information Provided in the Petition and Available in Service Files

The petition does not present any specific supporting information to suggest that disease or predation are threats that may be impacting the two Spring Mountains dark blue butterflies or are likely to impact either of the subspecies in the future. Disease and predation are listed in the petition, but the petition does not associate either of these threats to actual locations in the Spring Mountains known to be occupied by either of the two Spring Mountains dark blue butterflies. The threats are generally listed in the petition, but there is no information on existing or probable impacts to either of the subspecies associated with these potential threats in the petition or in our files. In summary, we find that the information provided in the petition, as well as other information in our files, does not present substantial scientific or commercial information indicating that the petitioned action may be warranted due to disease or predation.

However, we will further evaluate all factors, including disease or predation, in our 12-month status review and finding for these subspecies.

D. The Inadequacy of Existing Regulatory Mechanisms.

Information Provided in the Petition

The petition does not provide any information to suggest that an inadequacy of existing regulatory mechanisms may be a threat to the two Spring Mountains dark blue butterflies.

Evaluation of Information Provided in the Petition and Available in Service Files

The petition does not provide information that an inadequacy of existing regulatory mechanisms has negatively impacted the two Spring Mountains dark blue butterflies. In addition, we have no information in our files related to the inadequacy of existing regulatory mechanisms for these two subspecies. In summary, we find that the information provided in the petition, as well as other information in our files, does not present substantial scientific or commercial information indicating that the petitioned action may be warranted due to an inadequacy of existing regulatory mechanisms. However, we will further evaluate all factors, including the inadequacy of existing regulatory mechanisms in our 12-month status review and finding for these subspecies.

E. Other Natural or Manmade Factors Affecting Its Continued Existence.

Information Provided in the Petition

The petition discusses drought and its potential effects on the two Spring Mountains dark blue butterflies. First, the petition states that drought may become even more common in the Great Basin as climate change alters future precipitation (WildEarth Guardians 2011, p. 16). Specifically, the petition references Austin *et al.* (2008) who states that exposed larval host plants (*Eriogonum umbellatum*) may dry out before blooming or seed production, and drought may kill host plants, especially at lower elevations or in marginal settings (WildEarth Guardians 2011, p. 17). Secondly, the petition states that drought may contribute to increased atmospheric CO₂ by reducing the amount of CO₂ that is annually taken up by terrestrial vegetation; this situation may favor invasive annual grasses, including cheatgrass (WildEarth Guardians 2011, p. 17). Third, the petition states that climate change could affect bloom phenology in butterfly host plants which could disrupt the butterfly's use of the plants (WildEarth Guardians 2011, p. 17). Fourth, the petition states that butterflies in the Great Basin that exist in small, isolated populations will not likely be able to shift to other habitats to adapt to climate change (WildEarth Guardians 2011, p. 18).

The petition states that hundreds of larval host plants were found dead, likely a result of drought and exposure, at a site that is considered a source for *Euphilotes ancilla purpura*, although no year was associated with this information in the petition (WildEarth Guardians 2011, p. 6). In addition, the petition claims that very few butterflies

(approximately 20 individuals) were observed over six trips to this same site, representing perhaps 5 percent of annual peak numbers from the same location 10 years before (WildEarth Guardians 2011, p. 6).

The petition also discusses the biological vulnerability of the two Spring Mountains dark blue butterflies due to their limited distribution and apparently small and/or small number of populations (WildEarth Guardians 2011, p. 18). The petition cites Brook *et al.* (2008, p. 455) as evidence that population size matters and small populations are more likely to go extinct as a result of chance events (WildEarth Guardians 2011, p. 18). In addition, the petition notes that characteristic butterfly population fluctuations and short generation times, combined with small populations, can influence genetic diversity and long-term persistence (Britten *et al.* 2003, pp. 229, 233). The petition further asserts that *Euphilotes ancilla purpura* and *E. a. cryptica* apparently occur as small populations that may be more vulnerable to extirpation (WildEarth Guardians 2011, p. 18).

Evaluation of Information Provided in the Petition and Available in Service Files

The petition states that very few butterflies (approximately 20 individuals) were observed during six trips to one location, representing perhaps 5 percent of the annual peak numbers at that location (likely *Euphilotes ancilla purpura*) compared with the same location 10 years before (WildEarth Guardians 2011, p. 6). However, the petition does not state the year in which these surveys took place. Overall, the petition provides

little information related to the distribution, numbers of populations, size of populations, or population trends for the two Spring Mountains dark blue butterflies. The petition provides little to no specific information that indicates that biological vulnerability may be a threat to the two Spring Mountains dark blue butterflies.

Information in the literature and in our files on numbers of individuals reported during various years has most likely grouped all individuals of *E. a. purpura* and *E. a. cryptica* together in some years because the subspecies was not split into two subspecies until 2008 (Austin *et al.* 2008). It is therefore difficult to separate out the discussions of the distribution, abundance, number and size of populations, population trends, and threats by subspecies. For some data years, we are able to distinguish which subspecies was observed during the surveys based on the sample date (each subspecies has a different flight season so we were able to determine which subspecies was observed based on the date it was flying). In addition, survey methods were not identical between years and sampling efforts for all sites.

Information in our files reveals 9 observations of *Euphilotes ancilla purpura* in 1995, and 13 observations of *E. a. cryptica* in 1996 (Weiss *et al.* 1995, p. 21; Weiss *et al.* 1997, Map 2.1) (Table 1). In 1998, there was 1 observation of *E. a. purpura* and 28–60 individuals of *E. a. cryptica* (Boyd and Austin 1999, Tables 1–12). In 1999, records indicate observations of seven individuals which likely included both *E. a. purpura* and *E. a. cryptica* (Dewberry *et al.* 2002, p. Appendix 1). In 2000, researchers observed 9–13 *E. a. cryptica*, and *E. a. purpura* was observed but no numbers were given (Boyd and

Austin 2001, p. 7). No *E. a. purpura* or *E. a. cryptica* were detected in 2002 (Dewberry *et al.* 2002, p. Appendix 1), and only a single *E. a. purpura* was seen in 2007 (Datasmiths 2007, p. 17). Two studies have recently been conducted on dark blue butterflies in the Spring Mountains. The first study observed a single *E. a. purpura* in 2010, and 12 *E. a. purpura* in 2011, although additional survey areas were included in 2011 (Pinyon 2010, p. 2; Pinyon 2011, p. 22). The second study observed 11 *E. a. cryptica* and no *E. a. purpura* in 2010 (Thompson *et al.* 2010, pp. 1–7). Service files contain a record of a phone conversation with species experts where they indicated that “decent” numbers of the early-flying population of dark blue butterflies (now considered *E. a. purpura*) were detected in 2006, whereas the late-flying population of the dark blue butterfly (now considered *E. a. cryptica*) was present only at Cold Creek in very low numbers (Service 2006, p. 2).

Table 1. Observations of the two Spring Mountains dark blue butterflies between 1995 and 2011 from Service files.

Year	<i>Euphilotes ancilla purpura</i>	<i>Euphilotes ancilla cryptica</i>	either <i>E. a. purpura</i> or <i>E. a. cryptica</i>
1995	9		
1996		13	
1998	1	28–60	
1999			7
2000	observed	9–13	
2002	0	0	
2007	1		
2010	1	11	
2011	12		

The information in our files presents butterfly observations from a number of years, but these observations represent varying survey efforts and various survey

methodologies (Table 1). Therefore, it is not possible to compare the observation numbers in our files to the petitioner's claim that the population numbers have declined over time. While we lack specific survey information about population numbers or population declines for the two Spring Mountains dark blue butterflies at this time, the information that is available may represent a cause for concern about the population size and potential declining trend of these butterflies because they are endemic to the Spring Mountains, exist in small, isolated populations, are biologically vulnerable, and have limited distributions. Therefore, given the above concerns and the information in the petition indicating a potential decline in population numbers, we find that there is substantial information that the petitioned action may be warranted.

Based on the information in our files, recent projections of climate change in the Great Basin over the next century include: (1) Increased temperatures, with an increased frequency of extremely hot days in summer; (2) more variable weather patterns and more severe storms; (3) more winter precipitation in the form of rain, with potentially little change or decreases in summer precipitation; and (4) earlier, more rapid snowmelt (United States Environmental Protection Agency 1998, pp. 1–4; Chambers and Pellant 2008, pp. 29–33). It is difficult to predict local climate change impacts, due to substantial uncertainty in trends of hydrological variables, limitations in spatial and temporal coverage of monitoring networks, and differences in the spatial scales of global climate models and hydrological models (Bates *et al.* 2008, p. 3). Thus, while the information in the petition and our files indicates that climate change has the potential to affect vegetation and habitats used by butterflies in the Great Basin in the long term, there is

much uncertainty regarding which habitat attributes could be affected, and the timing, magnitude, and rate of changes relevant to the two Spring Mountain dark blue butterflies. Therefore, the information in the petition and our files does not provide substantial information that the petitioned action may be warranted because neither the petition nor our files provides specific information regarding how climate change is likely to impact the two Spring Mountains dark blue butterflies in the future. Overall, the petition and the information in our files presents general information about potential impacts to the two Spring Mountains dark blue butterflies from climate change, and we will assess those impacts further in the status review.

General biological information in our files indicates that the combination of few populations, small ranges, and restricted habitats can make a species susceptible to extinction or extirpation from portions of its range due to random events such as fire, drought, disease, or other occurrences (Shaffer 1987, pp. 71–74; Meffe and Carroll 1994, pp. 190–197). We have limited information related to the overall abundance, distribution, number and size of populations, or population trends for the two Spring Mountains dark blue butterflies in our files. We do not have additional information in our files related to biological vulnerability as a threat to either of the two subspecies.

In summary, we find that the information provided in the petition, as well as other information in our files, presents substantial scientific or commercial information indicating that the petitioned action may be warranted due to other natural or manmade factors affecting its continued existence, especially given the low numbers of individuals

observed of both subspecies and the petitioner's claim that the butterfly's (believed to be *Euphilotes ancilla purpura*) peak numbers are at 5 percent of the numbers from 10 years before. Because of the recent (2008) taxonomic change that split *E. a. purpura* into *E. a. purpura* and *E. a. cryptica*, we cannot determine with certainty to which subspecies much of the data and information in the petition refers. As a result, we cannot separate the effects and trend data between these two subspecies, and, therefore, without more information, we are assuming that any potential impacts and declining trends regarding either of these two subspecies actually applies to both subspecies. We will further evaluate all factors, including other natural or manmade factors affecting its continued existence, in our 12-month status review and finding for these subspecies.

Finding

Based on our review of the information in the petition and readily available in our files, we find that the petition presents substantial scientific or commercial information indicating that listing the two Spring Mountains dark blue butterflies (*Euphilotes ancilla purpura* and *E. a. cryptica*) throughout their ranges may be warranted. This finding is based on information provided under factor E (see above). We determine that the information provided under factors A, B, C, and D is not substantial.

Because we have found that the petition presents substantial information indicating that listing the two Spring Mountains dark blue butterflies (*Euphilotes ancilla purpura* and *E. a. cryptica*) may be warranted, we will initiate status reviews to

determine whether listing the two Spring Mountains dark blue butterflies (*Euphilotes ancilla purpura* and *E. a. cryptica*) under the Act is warranted.

The “substantial information” standard for a 90-day finding, under section 4(b)(3)(A) of the Act and 50 CFR section 424.14(b) of our regulations, differs from the Act’s “best scientific and commercial data” standard that applies to a status review to determine whether a petitioned action is warranted. A 90-day finding does not constitute a status review under the Act. In a 12-month finding, we will determine whether a petitioned action is warranted after we have completed a thorough status review of the species, which is conducted following a substantial 90-day finding. Because the Act’s standards for 90-day and 12-month findings are different, as described above, a substantial 90-day finding does not mean that the 12-month finding will result in a warranted finding.

Morand’s Checkerspot Butterfly Petition

A. The Present or Threatened Destruction, Modification, or Curtailment of Its Habitat or Range.

Information Provided in the Petition

The petition states that Morand’s checkerspot butterfly is recognized as a priority species by the United States Forest Service (USFS), and it is recognized as a species of

concern in the Conservation Agreement for the SMNRA and in the Clark County Multiple Species Habitat Conservation Plan (Boyd 2011, p. 1). The petition also notes that the Nevada Natural Heritage Program is tracking the species (Boyd 2011, p. 1).

The petition lists several threats to the Morand's checkerspot butterfly including the proliferation of invasive plants (weeds), an elevated risk of wildland fires associated with invasive plants, and the loss of larval and adult resources caused by feral horses (Boyd 2011, p. 2). In addition, the petition discusses concern with the survey methods used, the qualifications of the surveyors, and the use of data.

The petition states that a fuels reduction project took place from 2007 to 2010 and drastically modified a site where Morand's checkerspot butterflies occurred (Boyd 2011, p. 4). In addition, the petition claims that hundreds of thousands of larval host plants and nectar plants were destroyed as a result of this fuels reduction project, and the butterfly was impacted by worker trampling, vehicle crushing, moving equipment, and the disposal of cut waste (Boyd 2011, p. 4).

Evaluation of Information Provided in the Petition and Available in Service Files

The petition does not present any specific supporting information that invasive plants, wildland fires, and feral horses are threats that may be impacting Morand's checkerspot butterfly or are likely to impact the subspecies in the future. These threats are listed in the petition, but the petition does not associate any of these threats to actual

locations known to be occupied by the subspecies. The threats are generally listed in the petition, but there is no information on existing or probable impacts to the subspecies associated with these potential threats in the petition or in our files. In addition, the petition discusses concern with the survey methods used, the qualifications of the surveyors, and the decipherability of data. Our files contain information indicating that qualified biologists have used accepted methodologies to conduct surveys (USDA 2007, pp. 1–7; Thompson et al. 2010, pp. 72–73).

Information in our files indicates that the 2007 Spring Mountains Hazardous Fuels Reduction Project analyzed the potential impacts to the Morand’s checkerspot butterfly, concluding that the project “may impact individuals, but is not likely to cause a trend to Federal listing or loss of viability of the subspecies” (USDA 2007, p. 18). Even though the petition states that a Morand’s checkerspot butterfly site was drastically modified, the petition does not provide specific information on the location of the site or evidence to show that the butterfly was affected by this project. There is no information in the petition or in our files to show that Morand’s checkerspot butterfly numbers declined after the fuel reduction project or that butterflies were impacted as a result of this project.

In summary, we find that the information provided in the petition, as well as other information in our files, does not present substantial scientific or commercial information indicating that the petitioned action may be warranted due to the present or threatened destruction, modification, or curtailment of its habitat or range.

B. Overutilization for Commercial, Recreational, Scientific, or Educational Purposes.

Information Provided in the Petition

The petition does not provide any information to suggest that overutilization for commercial, recreational, scientific, or educational purposes may be a threat to the Morand's checkerspot butterfly.

Evaluation of Information Provided in the Petition and Available in Service Files

The petition does not provide information that overutilization for commercial, recreational, scientific, or educational purposes has negatively impacted the Morand's checkerspot butterfly. In addition, we have no information in our files related to overutilization for this subspecies. In summary, we find that the information provided in the petition, as well as other information in our files, does not present substantial scientific or commercial information indicating that the petitioned action may be warranted due to overutilization for commercial, recreational, scientific, or educational purposes.

C. Disease or Predation.

Information Provided in the Petition

The petition does not provide any information to suggest that disease or predation may be a threat to the Morand's checkerspot butterfly.

Evaluation of Information Provided in the Petition and Available in Service Files

The petition does not provide information that disease or predation has negatively impacted the Morand's checkerspot butterfly. In addition, we have no information in our files related to disease or predation for this subspecies. In summary, we find that the information provided in the petition, as well as other information in our files, does not present substantial scientific or commercial information indicating that the petitioned action may be warranted due to disease or predation.

D. The Inadequacy of Existing Regulatory Mechanisms.

Information Provided in the Petition

The petition does not provide any information to suggest that an inadequacy of existing regulatory mechanisms may be a threat to the Morand's checkerspot butterfly.

Evaluation of Information Provided in the Petition and Available in Service Files

The petition does not provide information that an inadequacy of existing

regulatory mechanisms has negatively impacted the Morand's checkerspot butterfly. In addition, we have no information in our files related to the inadequacy of existing regulatory mechanisms for this subspecies. In summary, we find that the information provided in the petition, as well as other information in our files, does not present substantial scientific or commercial information indicating that the petitioned action may be warranted due to an inadequacy of existing regulatory mechanisms.

E. Other Natural or Manmade Factors Affecting Its Continued Existence.

Information Provided in the Petition

The petition claims that general declines in the numbers of all covered butterfly species (covered means that the species is included in the Conservation Agreement for the SMNRA and in the Clark County Multiple Species Habitat Conservation Plan) in the Spring Mountains were evident in 2005 and that decreases in the numbers of Morand's checkerspot butterfly at some locations were identified by 2003 (Boyd 2011, p. 2). Specifically, the petition states that at one location, 104 individuals were recorded on a single survey day in 2001, whereas 65 were recorded in 2002, and 19 were recorded in 2003. The petition states that they believe the highest number recorded in 2010 was 11, but the petition states that this number is not verified (Boyd 2011, p. 2). At another location in 2002, many hundreds were seen on each of two visits, whereas none were found in 2007 during a single day survey. In addition, no pre-diapause larvae were found and no earlier post-diapause larval feeding on the host plants was seen during that same

survey day (Boyd 2011, p. 2). At a third location in 2002, the petition states that 46 Morand's checkerspot butterflies were seen during a protocol survey and an additional 200–300 individuals were seen outside of the transect area, whereas the petition claims that only 1–3 individuals were recorded on a given day in 2010 in the same two areas (Boyd 2011, p. 2).

The petition lists drought as a threat to the Morand's checkerspot butterfly (Boyd 2011, p. 4).

Evaluation of Information Provided in the Petition and Available in Service Files

The petition claims that declines of Morand's checkerspot butterfly have occurred since 2003 as evidenced by declines in survey numbers at three unspecified locations (Boyd 2011, p. 2). Information in our files leads us to believe that two of these unspecified locations are Griffith Peak and Lee Canyon based on similarity of results reported in Dewberry *et al.* (2002, Appendix 1). Information in our files reveals that Morand's checkerspot butterfly surveys found 129 in 2010, and 1,040 in 2011 (Pinyon 2011, p. 22). In addition, Pinyon (2011, p. 23) states that Morand's checkerspot butterflies were observed throughout the survey period in all three areas surveyed in 2010 and 2011. The most observed in a single day in 2010 was 76, and the most observed in a single day in 2011 was 343 (Pinyon 2011, p. 23). Given that butterfly populations are highly dynamic, and butterfly distributions can be highly variable from year to year (Weiss *et al.* 1997, p. 2), the widely varying information in the petition and in our files

does not provide evidence to show a declining trend in Morand's checkerspot butterflies since 2003, as claimed by the petition.

Drought is listed as a threat in the petition, but the petition does not provide any specific information that drought has negatively impacted the Morand's checkerspot butterfly, or is likely to impact the subspecies in the future. In addition, we have no information in our files related to drought as it relates to the effects of climate change for this subspecies. In summary, we find that the information provided in the petition, as well as other information in our files, does not present substantial scientific or commercial information indicating that the petitioned action may be warranted due to other natural or manmade factors affecting its continued existence.

Finding

Based on our review of the information in the petition and readily available in our files, we find that the petition does not present substantial scientific or commercial information to indicate that listing the Morand's checkerspot butterfly under the Act as endangered or threatened may be warranted at this time. We base this conclusion on finding no specific information on threats to the subspecies. Additionally, we have more recent information in our files that does not support the petitioner's claim that Morand's checkerspot butterfly has experienced a decrease in its numbers since 2003. The information does not suggest that threats are acting on the Morand's checkerspot butterfly such that the species may be endangered or become endangered now or in the foreseeable

future. We make this finding under section 4(b)(3)(A) of the Act and 50 CFR 424.14(b) of our regulations.

Although we will not review the status of the species at this time, we encourage interested parties to continue to gather data that will assist with the conservation of the Morand's checkerspot butterfly. If you wish to provide information regarding the Morand's checkerspot butterfly, you may submit your information or materials to the Field Supervisor/Listing Coordinator, Nevada Fish and Wildlife Office (see **ADDRESSES**), at any time.

References Cited

A complete list of references cited is available on the Internet at *<http://www.regulations.gov>* and upon request from the Nevada Fish and Wildlife Office (see **FOR FURTHER INFORMATION CONTACT**).

Author

The primary authors of this notice are the staff members of the Nevada Fish and Wildlife Office and the Pacific Southwest Regional Office.

Authority

The authority for this action is the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Date: July 27, 2012

Signed: _____

Rowan W. Gould

Director, U.S. Fish and Wildlife Service

~~**Endangered and Threatened Wildlife and Plants; 90-Day Finding on a Petition to List the Two Spring Mountains Dark Blue Butterflies (*Euphilotes ancilla purpura* and *Euphilotes ancilla cryptica*) and Morand's Checkerspot Butterfly (*Euphydryas anicia morandi*) as Endangered or Threatened**~~

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